AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An image processing apparatus comprising:

a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit;

a ~~first~~ control ~~program~~layer;

~~a second control~~an external API (application program interface) program; and

an application group including ~~an~~ one or more application ~~program~~programs stored in an application layer,

wherein the hardware resource, the control layer, the external API program and the ~~programs~~ application group are arranged in such a hierarchical architecture that the ~~first~~ control ~~program~~ layer is superordinate to the hardware resource, and

the application group including the one or more application ~~program~~ programs and the external API ~~second control~~ program are superordinate to the ~~first~~ control ~~program~~layer,

the ~~first~~ control ~~program~~ layer includes a first API ~~(application program interface)~~ for receiving, with use of a predefined function, a first request relating to image processing from the ~~second control~~external API program and a second request relating to image processing from the one or more application ~~program~~programs, and controls, on receiving either of the first and second requests,

the hardware resource to perform image processing based on the received request, and

the ~~second control~~external API program includes a second API for receiving a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command as the first request to the ~~first control program~~control layer, bypassing the one or more application programs of the application group stored in the application layer;

wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API.

2. (Currently Amended) The image processing apparatus according to claim 1, wherein the ~~first control program~~control layer passes the received first request to the one or more application ~~program~~ programs if the first request is directed to the one or more application programs~~program~~.

3. (Original) The image processing apparatus according to claim 1, wherein the third request is data expressed in an XML.

4. (Currently Amended) The image processing apparatus according to claim 3, wherein the ~~second control~~external API program further includes: a first converting unit for extracting predetermined information from the received XML data;

and a second converting unit for converting the extracted information to the command supported by the first API.

5. (Currently Amended) The image processing apparatus according to claim 1, wherein ~~the hardware resource includes the image forming unit, the requests relate to execution of a print job, and on~~upon receiving a request relating to execution of ~~the~~ a print job, the ~~first control program~~control layer controls the image forming unit to perform the print job.

6. (Currently Amended) The image processing apparatus according to claim 1, wherein ~~the hardware resource includes the read unit, the requests relate to execution of a scan job, and on~~upon receiving a request relating to execution of ~~the~~ a scan job, the ~~first control program~~control layer controls the read unit to perform the scan job.

7. (Currently Amended) An image processing apparatus comprising:

a hardware resource including at least one of an image forming unit, a read unit, and a display unit;

a ~~first control~~control layer ~~program~~;

~~a second control~~ an external API (application program interface) program; and

an application group including ~~an~~ one or more application ~~program~~programs stored in an application layer,

wherein the hardware resource, the control layer, the application group and the ~~programs~~ external API program are arranged in such a hierarchical architecture

~~in the stated order~~ that the control layer is superordinate to the hardware resource, and the application group including the one or more application programs and the external API program are superordinate to the control layer,

the ~~first control program~~ control layer includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the ~~second control~~ external API program, and controls the hardware resource to perform image processing based on the received first request, and

the ~~second control~~external API program includes a second API for receiving a second request relating to image processing from an external source and a third request relating to image processing from the one or more application ~~program~~programs, converts, on receiving either of the second and third requests, the received request to a command supported by the first API, and passes the command as the first request to the ~~first~~ control ~~program~~layer, bypassing the one or more application programs of the application group stored in the application layer;

wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API.

8. (Currently Amended) The image processing apparatus according to claim 7, wherein the ~~second control~~external API program passes the received second request to the one or more application programs ~~program~~ if the second request is directed to the one or more application programs~~program~~.

9. (Original) The image processing apparatus according to claim 7, wherein the second request is data expressed in an XML.

10. (Currently Amended) The image processing apparatus according to claim 9, wherein the ~~second~~ external ~~control~~ API program further includes: a first converting unit for extracting predetermined information from the received XML data; and a second converting unit for converting the extracted information to the command supported by the first API.

11. (Currently Amended) The image processing apparatus according to claim 7, wherein ~~the hardware resource includes the image forming unit, the requests relate to execution of a print job, and on~~upon receiving a request relating to execution of ~~the~~ a print job, the ~~first~~ control ~~program~~ layer controls the image forming unit to perform the print job.

12. (Currently Amended) The image processing apparatus according to claim 7, wherein ~~the hardware resource includes the read unit, the requests relate to execution of a scan job, and on~~upon receiving a request relating to execution of ~~the~~ a scan job, the ~~first~~ control ~~program~~ layer controls the read unit to perform the scan job.

13. (Currently Amended) An image processing apparatus, comprising:

a hardware resource including at least one of an image forming unit, a read unit, and a display unit;

a ~~first~~ control ~~program~~layer;

~~a~~ an external API (application program interface) ~~second control~~ program; and

an application group including ~~an~~ one or more application ~~program~~programs stored in an application layer,

wherein the ~~first~~ control ~~program~~ layer is arranged between the hardware resource and the application ~~program~~ group including the one or more application programs, and the ~~second control~~external API program is arranged superordinate to the ~~application program~~one or more application programs in the application group in a hierarchical architecture,

the ~~first~~ control ~~program~~ layer includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the ~~second control~~external API program and a second request relating to image processing from the one or more application ~~program~~programs, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request,

the ~~second control~~external API program includes a second API for receiving a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command to an appropriate one of the ~~first control~~control layer ~~program~~ , and the ~~application~~ one or more ~~program~~ application programs, depending on the requested processing, the command passed to the ~~first control program~~control layer serving as the first request, ~~and on receiving the command from the second control program, the application program passes to the first control program, a request for performing~~

~~the processing based on the received command, the request passed to the first control program serving as the second request~~

wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API.

14. (Original) The image processing apparatus according to claim 13, wherein the third request is data expressed in an XML.

15. (Currently Amended) The image processing apparatus according to claim 14, wherein the ~~second control program~~external API program further includes: a first converting unit for extracting predetermined information from the received XML data; and a second converting unit for converting the extracted information to the command supported by the first API.

16. (Currently Amended) The image processing apparatus according to claim 13, wherein ~~the hardware resource includes the image forming unit, the requests relate to execution of a print job, and on~~upon receiving a request relating to execution of ~~the~~ a print job, the ~~first~~ control ~~program~~ layer controls the image forming unit to perform the print job.

17. (Currently Amended) The image processing apparatus according to claim 13, wherein ~~the hardware resource includes the read unit, the requests relate to execution of a scan job, and on~~ upon receiving a request relating to execution of

~~the~~ a scan job, the ~~first~~ control ~~program~~ layer controls the read unit to perform the scan job.

18. (Currently Amended) An image processing apparatus comprising:

a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit;

a ~~first~~ control ~~program~~layer;

~~a second control~~ an external API (application program interface) program; and

an application group including one or more application programs stored in an application layer,

wherein the hardware resource and the programs are arranged in such a hierarchical architecture that the ~~first~~ control ~~program~~ layer is superordinate to the hardware resource, and the one or more application programs and the external API ~~second control~~ program are superordinate to the ~~first control program~~control layer,

the ~~first~~ control ~~program~~ layer includes a first API ~~(application program interface)~~ for receiving a first request relating to image processing from the ~~second control~~external API program and a second request relating to image processing from the one or more application programs, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request, and

the ~~second control~~external API program includes a second API for receiving a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the

command as the first request to the ~~first~~ control ~~program~~layer, bypassing one or more application programs of the application group stored in the application layer;

wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API,

wherein ~~the publicly released function is not supported by any of the one or more application programs~~the software is used to control the hardware resource to perform processing that is not executable by the hardware resource under control of any of the one or more application programs.

19. (Previously Presented) The image processing apparatus according to claim 18, wherein the second API is an external API for controlling operations of the hardware resource according to requests received from an external device.

20. (Currently Amended) The image processing apparatus according to claim 1, wherein the second API ~~is~~ includes a function callable by the external source, wherein the function ~~a collection of sets~~calls ~~of~~ a plurality of functions that are predefined by the ~~first~~ control ~~program~~ layer~~that are defined by a single collective function~~.

21. (Currently Amended) The image processing apparatus according to claim 7, wherein the second API includes a function callable by the external source, wherein the function ~~is a collection of sets of~~ calls a plurality of functions that are

predefined by the ~~first~~ control layer~~program that are defined by a single collective function~~.

22. (Currently Amended) The image processing apparatus according to claim 13, wherein the second API includes a function callable by the external source, wherein the function ~~is a collection of sets of~~ that calls a plurality of functions that are predefined by the ~~first~~ control ~~program that are defined by a single collective function~~layer.

23. (Currently Amended) The image processing apparatus according to claim 18, wherein the second API includes a function callable by the external source, wherein the function calls ~~is a collection of sets of~~ a plurality of functions that are predefined by the ~~first~~ control ~~program~~ layer~~that are defined by a single collective function~~.